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St. Bartholomew's Hospital Journal,

SEPTEMBER 14th, 1897.

"Æquam memento rebus in arduis
Servare mentem."—*Horace,* Book ii, Ode iii.

Weak Hearts.

A Clinical Lecture delivered on June 18th, 1897.

By SAMUEL GEE, M.D., F.R.C.P.

IN the hospital we meet with many cases of heart affections, but they are almost all due to valvular disease, any affection of the muscular walls or of nerve supply being secondary to disease of fibrous structures, especially the endocardial. In private practice cases of this kind are seldom met with; most affections of the heart are muscular or nervous from the first. In hospitals we are great in murmurs and thrills; in private practice auscultation and percussion more often than not are of no avail, unless to tell us that there is nothing wrong with the heart that they can discover. They will tell us what there is not, rather than what there is. It would be interesting to go into the reasons for this difference of disease in the different ranks of life; one great factor is that rheumatic fever is comparatively rare in private practice.

Weak hearts are indicated by symptoms of three kinds: (i) Sensations referred to the heart. (ii) Shortness of breath. (iii) Changes in the pulse.

(i) Sensations referred to the heart.

(*a*) *Pain*, which may be of all degrees of severity; usually slight, sometimes so slight that patients will often refuse to use the word pain, but sometimes as bad as in genuine angina pectoris. By genuine angina pectoris I mean the pain associated with degeneration of the muscular walls of the heart. This form, not due to structural disease of the organ, is especially apt to occur in women, which they call heart attacks. During such an attack the extremities sometimes become cold and blue, "dead fingers," as they are often called. If a young woman is suffering from pain having all the features of angina, you must take my word for it that the probability of muscular degeneration of the heart is very slight indeed. Another point of difference is that the ordinary remedies for angina do no good, but even harm, and I never think of giving nitrites in these cases.

These sensations, more or less painful, may be felt over any part of the heart. Sometimes there is a feeling of tightness across the chest, hence Heberden gave it the name *angina* pectoris. Sometimes the pain is not over the heart at all,—for instance, just below the right nipple or between the shoulder-blades high up. If it be felt over the epigastrium it is by no means easy to distinguish it from a stomach pain, especially as these patients often have weak stomachs. The name *cardialgia* dates back to the time when physicians could not distinguish between a heart pain and a stomach pain, and illustrates the difficulty. In Horace the word *precordia* signifies the pit of the stomach.

(*b*) *Palpitations.*—These may be either ordinary palpitations in which all the heart-beats are sensible to the patient, or a form in which only one or two beats are thus felt. There is a prolonged diastole, during which the pulse

at the wrist intermits, then the heart gives a sort of kick (sensible by the patient), and then goes on beating again. This is a very common symptom in weak hearts. Patients sometimes speak of the heart "fluttering." It is difficult to know exactly to what this is due; nothing abnormal is heard on examination.

(*c*) Indescribable sensations referred to the heart. These, when bad, occasion much distress, and patients feel as if they were dying. Anguish is a name often given to this symptom.

These morbid conditions are often brought on by exertion, excitement, or by taking food (especially indigestible food). But sometimes the immediate cause of the attack is not obvious,—as, for instance, when it comes on during sleep.

(ii) Shortness of breath on slight exertion, such as going upstairs, is the second kind of symptom. A French physician said, if a patient complain of shortness of breath don't examine his lungs, examine his heart.

(iii) Changes in the pulse. The pulse may be disturbed in frequency or in regularity. In the former instance it may be too frequent to count, but if you use a sphygmograph cleverly you may find the rate to be 200 or more, but quite regular. These attacks of frequent action of the heart lasting an hour or two are usually due to reflex disturbance, generally from the stomach, and they may be quite relieved by vomiting. There is no evidence of any affection of the heart. But in "weak hearts" the increased frequency is constant, seldom so frequent that the pulse cannot be counted. In the other class of cases the pulse is irregular or intermittent, and intermittence is usually associated with "thudding," and sensations referred to the heart.

These are the chief symptoms, and, as I have said, there are no definite physical signs. The impulse of the heart is often very weak, and sometimes impalpable; but the patient is often fat, and sometimes emphysematous. The sounds are natural or merely weak; percussion may sometimes be able to detect slight dilatation.

Pathology.—Now as to the pathology or nature of these symptoms. There are at least two different kinds of weak hearts. No doubt a great many of them are really due to degenerative changes in the muscular fibre, tending to fatty heart. But in many other cases the course of the disease makes us believe that there are no such degenerative changes; if the symptoms have gone on a long time, or if they occur in the young, we cannot believe they are due to true angina. In these we assume some defect in the innervation of the heart, to use a phrase much in vogue, a neurosis of the heart. In many cases there is probably a combination of these conditions.

Ætiology.—Turning to ætiology, or the conditions under which weak heart occurs, we sometimes meet with a tendency to fits of palpitation in children; with this exception, the heart affection is one of adult life, of any age and both sexes. I am here not speaking of palpitation except as a symptom of weak heart. The probability of degeneration of the heart is greater after forty years of age, and greater the older the patient, so that age is an important factor in prognosis. It occurs in both sexes pretty equally, but the probability of degeneration is greater in men than in women. In women under forty the symptoms are probably due to nervous derangement.

The influence of family tendency is most undoubted. Perhaps the mother of a family suffers from a weak heart, and as the years go on you find the daughters one by one, as they reach fifty, begin to break down in exactly the same way.

The strain of life has much to do with it—worries, cares, business anxieties, and overwork. These conditions begin to tell when people have passed forty years. It is common in business men who have led a toilsome exciting life, who have worked up a large business from small beginnings, and have attained to wealth, perhaps great wealth; just as they reach the time which they looked forward to for enjoying their wealth their heart gives way, and thenceforth they enjoy nothing. The meals of such men have been hurried and irregular, often a very hurried breakfast followed by no lunch. If they live out of town they are constantly hurrying to catch trains.

There is often a history of a great deal too much alcohol, and perhaps tobacco; they find their strength failing, and they fly to alcohol for support; their lunch becomes an excuse for drinking, their dinner is accompanied by champagne, and followed by port. These patients are often gouty, and suffer from arterial changes.

A similar state is common in professional men—and, I am sorry to say, especially in our own profession. I am even disposed to think the normal mode of death in a medical man is through a failing heart. He lives one long round of broken nights, of interrupted meals, of ceaseless work. As Pope says,—

> "Even Sunday shines no sabbath day to him."

The same is true of clergymen, who, whatever they did in the past, certainly lead no easy life to-day.

But undoubtedly hearts like this are sometimes found in people who have lived a quiet temperate life; we must all grow old, and many people grow old in their hearts first.

For the last eight years a very potent cause of weak heart has been rife, and that is influenza. Those past their prime, say past forty, fall victims to this. During an attack of influenza the heart sometimes suffers—its action is very feeble, the pulse feeble and very frequent, or in other cases infrequent, irregular, and intermittent. There is palpitation and pain of all kinds, sometimes like genuine angina pectoris. Sometimes people die during the attack of influenza from these heart symptoms. But if they recover from the attack, usually their heart never wholly recovers. And that is the worst of influenza; there are so many left with its legacy of weak heart.

A strain to the heart very commonly comes on suddenly during violent exertion. This is a factor at all ages, but especially in people just past youth, say past thirty. I know a case of an unmarried lady of thirty where it came on during swimming. A clergyman of thirty-six was playing hockey when he was seized with a sudden pain in the heart, and what he called "collapse." I have known golf the cause of this strained heart, as it is a game often played by men past their prime. Bicycling is a very common cause, especially in oldish people, but also at any age when excessive. Bicycling uphill is the worst of all; quite a number of elderly men have died on the spot while going uphill.

I should say that when patients at any age have once strained their hearts in any of these ways they seldom completely recover.

Tobacco in excess is a cause of all these symptoms in some people; excess of tea also, but this is a much less potent cause than tobacco.

In many patients there are signs of general nervous debility, "neurasthenia"—constant headache and backache, atonic dyspepsia, sleeplessness, and sometimes melancholia.

Course of the disease.—People past middle life never wholly recover, but by taking great care of themselves they may live many years, and at last die of something else. Sometimes they become subject to genuine angina pectoris and all its dangers, sometimes they manifest symptoms of fatty heart and a tendency to syncope, sometimes of a dilated heart and dropsy. Sometimes all these conditions occur together before death. In elderly people death may occur in two or three months after the first occurrence of symptoms.

Treatment.—Patients must avoid exertion; exercise must be moderate, the amount depending on the degree of the disease. Particularly they must avoid all hurry. Tobacco they had much better give up altogether, for this is one of the things of which old Dr. Samuel Johnson's saying is very true, "It is more easy to abstain than to be abstemious." They should avoid indigestible foods, all over-eating, and drinking too much liquid at meals; they must be strictly temperate in alcohol.

They must be got away if possible from an exacting business or profession for several months. A bracing place is best, they do not do well in hot climates; mountainous climates are not advisable, not only because of the climbing, but because of the rarefaction of the air. The easiest way, very often, of getting a man out of business is to send him abroad; English people prefer it; and if you name a place like Nauheim, which has a reputation in the treatment of heart disease, people will often go there who will not go anywhere else: moreover they are out of call to business, and they will stop away longer than they would in their native country. I am doubtful if there be any specific character in the treatment there; it is a dull, quiet life, and their diet and habits are regulated; but they all know the name of Nauheim, and will quite cheer up at the idea, buoyed by hope, the best of tonics.

As to drugs, two are especially useful, arsenic and strychnine. I usually prescribe arseniate of soda, $\frac{1}{40}$ of a grain in a pill, and about the same dose of strychnine. These should be given for a considerable time. Arsenic is particularly good in cases where there is pain. Digitalis is no use here.

Really bad cases had better take no exercise at all; they should go about in a Bath chair, and be carried upstairs. Cases tending to end in dropsy should be treated as for dilated heart, and digitalis and strophanthus may now be tried.

Some Chapters on Pneumothorax.

By SAMUEL WEST, M.D.

II. ONSET, SYMPTOMS, AND PHYSICAL SIGNS.*

ONSET.—The onset of pneumothorax is sudden, and often without obvious cause. The patient is seized all at once with pain in the side and shortness of breath. The difficulty in breathing rapidly increases, and in a few minutes becomes extreme. The patient is now found sitting up, panting and gasping for breath, rapidly becoming more and more cyanosed, and with an expression of the greatest anxiety and distress, unable to speak or, at any rate, to utter more than a syllable or two at a time, the whole body bathed in perspiration, and the extremities cold. There may be a little cough, and it, like speaking, adds greatly to the suffering. The mental distress is great, for the patient looks and feels as if about to die.

The symptoms rapidly grow worse, and it is evident that unless relief is given the patient will die. A needle is inserted into the side, air escapes, and the breathing is relieved; the needle is removed, but the air again accumulates, and the symptoms become once more urgent. A second, and it may be a third time relief is given by paracentesis; but often the relief is but temporary, and the symptoms soon become as bad as ever, the opposite lung becomes congested, and the patient dies, it may be within an hour or two of the commencement of the attack. If the result is not to be so immediately fatal, the interval between the tappings increases, the dyspnœa gradually becomes less severe, and in twenty-four hours or so the extreme urgency of the symptoms passes away.

Dyspnœa.—The dyspnœa depends upon several factors: (1) upon the rapid collapse of the affected lung; (2) upon the partial collapse of the opposite lung, caused by the displacement of the organs; and (3) upon the consequent

* No. I appeared in the April number of this year.

congestion of the opposite lung; while it varies a good deal in proportion to the amount of previous disease in the lungs.

Although it is the rule for pneumothorax to be ushered in by the grave and urgent dyspnœa described, still it is not always so, and the absence of such acute symptoms is not conclusive against the presence of pneumothorax. In some cases, indeed, there may be little to suggest what has occurred, and the pneumothorax may be discovered only by physical examination when there has been hardly any appreciable dyspnœa to draw attention to the chest. These cases are usually called *latent or insidious pneumothorax*, and will be dealt with by-and-by.

If, as in some of these phthisical cases, there be widespread adhesions, the collapse of the lung on the affected side may be less, and it is also possible that the displacement of organs may be prevented. These cases are often spoken of as *partial pneumothorax*.

If there be extensive disease of the lung on the affected side it may make little difference to the patient whether the one lung is useless because it is infiltrated with tubercle or because it is collapsed as the result of the pneumothorax, and the symptoms, therefore, may be slight or even entirely absent.

If, however, the opposite lung be also much diseased, the dyspnœa must necessarily be extreme, and especially if there be much displacement of organs, for the reason that there is so little lung left for the performance of respiratory purposes. Yet it is extraordinary how little lung is really necessary for mere existence.

When pneumothorax occurs in the course of advanced phthisis there is one other cause of dyspnœa which deserves to be mentioned, though it is not usually referred to. Then the lung on the affected side contains many cavities, the secretion contained in them may be suddenly expelled into the air-tubes as the lung collapses, and if not immediately coughed up, may very seriously aggravate the dyspnœa. I have seen a patient all but suffocated in this way, and in two cases in which death occurred in twenty minutes and thirty minutes respectively from the time of onset, it was largely due to this cause.

Pain.—The sensation usually experienced is that of a sharp, stabbing or tearing pain, and is often described by the patient "as if something had suddenly given way in the chest." It is usually of short duration, and not very severe, or at any rate not severe for long. It is commonly felt in the mid-lateral region, *i. e.* in the axillary region, but it may be referred to the upper part of the chest in front or under the breast. Occasionally it is referred to the spine, to the angle of the scapula, or even to the abdomen, and it may radiate round the chest. In one case the pain was so severe that the patient could not be prevented from shrieking out, and the dyspnœa was not grave.

In some cases the initial symptom complained of is not that of pain, but of some other abnormal sensations, such as cold water running down the side, or of air rushing into it.

In the later stages the usual sensation is that of distension or tightness, which, though distressing, can hardly be called pain.

The occurrence of pneumothorax is sometimes marked, not by pain or dyspnœa, but by a sudden attack of faintness or collapse, upon which dyspnœa follows as soon as the patient rallies. Occasionally the collapse may be fatal, and pneumothorax thus be the cause of sudden death—an extremely rare occurrence, of which I have never seen an instance myself. Lebert describes a case of the kind in a medical man of twenty-eight years of age. Though I have not seen death from shock owing to perforation of the pleura I have seen it produced by perforation of the peritoneum. In this case the rupture of a hydatid of the liver caused death, the patient, a previously healthy young man, falling down suddenly in the street, and being picked up dead.

The temperature.—This presents nothing especially noteworthy. In itself pneumothorax need not affect the temperature at all. The onset, it is true, is usually attended with a drop in the temperature, which may be considerable if there be much shock or collapse. If any deviation of temperature be present it is due, not to the pneumothorax as such, but to the original disease which has caused it, *e. g.* phthisis, or to complications by which it has been followed, *e. g.* pleuritic effusion.

Where the temperature has been previously raised, as in phthisis, the onset of pneumothorax may be marked by the usual drop as stated, and it may be some little time before the previous level of temperature is reached again. This fact has been used as a strong argument in favour of what I believe to be a fallacious theory, viz. that pneumothorax, or, to put it more generally, the collapse and compression of the lung to which pneumothorax leads, and to which, of course, pleural effusions similarly lead, checks the progress of tubercle. Admitting the fact that pneumothorax may be followed by a diminution of fever, it may be permitted to question the explanation that this is due to a check in the development of tubercle in the compressed lung.

To this theory there are many objections, and as it involves questions of practice, it will be again referred to under treatment. For the present the objections may be simply stated:

1. That the theory has more exceptions than proofs.

2. That the occurrence of pneumothorax is often followed by the development or progress of tubercular mischief in the opposite lung.

3. That the relief of the collapse by operation is rarely followed by progress in tubercle, as it would be likely to be if the theory held true.

4. That recent tubercles, apparently of formation subsequent to the occurrence of pneumothorax, are not infrequently found po t mortem in the collapsed lung.

The explanation which I should give of the fact is this: the fever of phthisis is in great part due to septic absorption from cavities which are the seat of secondary infection with suppurative organisms, and is the same in character as that due to an abscess or pent-up pus. The collapse of the lung would act like the opening of an abscess, and evacuate the contents of the cavities, and be in the same way followed by a fall of temperature. If this explanation be correct the diminution of fever has nothing whatever to do with the rate of progress in the tubercular mischief.

The pulse varies greatly according to the general condition of the patient and the severity of the dyspnœa. Under any circumstances the respirations are likely to be more affected than the pulse, and accordingly the pulse-respiration ratio becomes perverted even to almost as marked a degree as in pneumonia, and may fall to 3 or 2 to 1.

If the onset of pneumothorax has been attended with shock or collapse, the pulse will be small, irregular, and perhaps hardly to be felt at the wrist, as in a patient fainting or collapsed from other causes. If the dyspnœa be extreme and suffocation imminent, the pulse betrays the consequent embarrassment of the heart, and the circulation through the lungs, for it becomes irregular in force and frequency, fluttering and of low tension; the action of the heart, though laboured, is not at first much accelerated, but becomes later very rapid and feeble.

When the dyspnœa has passed off, the pulse recovers itself quicker than the respirations, so that the perverted pulse-respiration-ratio may still continue for some time. It may then show no peculiarities other than would be met with in any person of feeble health, *i. e.* it is of low tension and easily disturbed in rate and power by slight causes.

The respirations may number 40, 50, or more in the minute, but there is a strong contrast between their number and their depth, as there is also between the shape and movements of the two sides.

Position of the patient.—As long as there is urgent dyspnœa, the patient sits upright, or lies in the semi-recumbent position with the shoulders raised. When the urgency of the dyspnœa is past, the patient takes that position which is found most comfortable. This varies much, but is usually upon the affected side, with the object, no doubt, of giving the opposite lung full play.

Physical signs.—The characteristic physical signs are distension of the side, displacement of organs, and tympanitic percussion, to which may be added the bell sound, and, if fluid be present, succussion, while in most cases the breath- and voice-sounds are absent.

The shape of the chest.—The affected side is greatly distended, the shoulder raised, the sternum thrust forward, and the intercostal spaces widened. This distension is not limited to the affected side only, but involves to some extent the other also, for the elastic traction of the lungs upon the ribs, which tends to keep the side somewhat smaller than it would otherwise be, is removed or diminished in consequence of the displacement of organs on to the sound side. In spite of this, the measurement may show a difference of an inch or so between the circumferences of the two sides.

This position is often described as the "maximum inspiratory position," but I think it may exceed anything which can be intentionally imitated in health.

If the intra-pleural tension be low the distension may be less marked; and if there be a large opening into the lung, so that there is no increase of tension at all, the distension may be entirely absent, or the side may even be contracted somewhat, much as it is after it has been opened for empyema, so that, although distension of the side is an important sign of pneumothorax, its absence does not count for much against that diagnosis.

The respiratory movements of the affected side.—The respiratory movements are absent, in other words the distension is fixed, for there is no expiratory retraction. On the other hand, if there be a free opening through the lung, the movements are present, or may even be exaggerated, just as they may be with a free external opening after empyema; but in these cases the movements of the chest have but little effect upon the lung, which, if it expands at all, is forced out only during expiration, rather than sucked out by inspiration.

On the opposite side the movements are rapid and shallow. The respiratory excursion is small, for though the side attains its maximum inspiratory expansion, it fails to retract to the extent it should on expiration. The movements of the diaphragm are seen also to be deficient on both sides, but especially on the affected side.

The rapidity of breathing varies with the dyspnœa, so that if dyspnœa be absent the respirations may be but little if at all accelerated, except by exertion.

The superficial veins over the affected side and also on the corresponding side of the neck and down the arm are sometimes found dilated. This is rightly referred to obstruction of the intra-thoracic veins. It is, however, a rare phenomenon, and only met with when there is high intra-pleural pressure, especially when there is a considerable effusion, and the conditions have existed for some time. It is therefore not so often met with now that pneumothorax is recognised earlier and treated more actively.

In the same way œdema may be seen, not a local œdema due to the pointing of pus, as may be met with in any neglected pyo-pneumothorax, but a general œdema of the whole side, the result of the venous obstruction just referred to.

The impulse of the heart is far out of its proper place; on the left side, this will be the apex of the heart, and may be

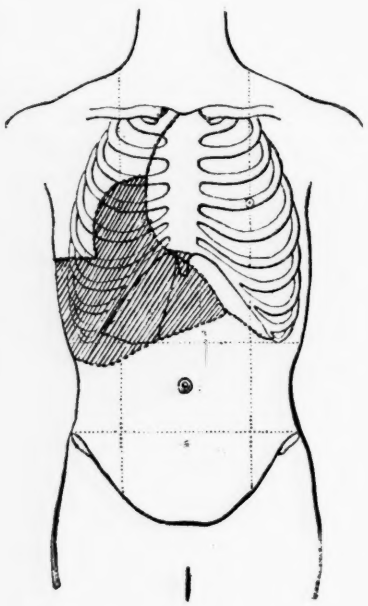
seen in the anterior axillary line; on the right side the impulse is that of the right auricle or ventricle, and may be seen in the right nipple line, or even an inch or so beyond it.

Palpation.—The impulse of the heart may be felt as well as seen in its new position.

The vocal vibrations on the affected side are usually completely absent, but may be sometimes indistinctly felt. On the opposite side, if there be much congestion of the lung, wheezing may be felt, but if not there is nothing abnormal on palpation.

Displacement of organs.—The mechanism of displacement has been already considered. It is due chiefly to the elastic retraction of the lung on the sound side, but it is supplemented on the affected side by the increased pressure on expiration, and by the general rise of intra-pleural pressure when fluid forms. As the result of these causes the heart and pleura are displaced far over on to the opposite side, while the diaphragm falls and carries the organs in relation with it downward into the abdomen.

Percussion.—The displacement is chiefly determined by means of percussion. The side yields a tympanitic note, which is obtained as far as the pleura extends in all directions; thus it may reach an inch or two beyond the



sternum on to the opposite side, to the costal arch below, or even somewhat beyond it.

The effects of displacement differ a good deal on the two sides, and it will be convenient to consider them separately, for with right pneumothorax it is the liver that is chiefly affected, and with left pneumothorax the heart.

The position of the displaced organs, as determined by percussion, is proved by post-mortem examination to correspond very closely indeed with the surface markings obtained upon the chest, as the diagrams demonstrate.

Pneumothorax of the right side.—The heart is seen and felt beating two inches or more outside the left nipple line. The area of cardiac dulness is correspondingly displaced, the right border being found an inch, it may be, to the left side of the sternum.

The chief displacement on this side is the position of the liver, for this is not only pushed downwards, but is curiously rotated. Percussion yields a resonant, tympanitic note right down to the costal arch Usually at this place the hepatic dulness makes itself evident, but in some cases where the diaphragm is so far depressed as to be convex towards the abdomen, there may be a zone of resonance one to two inches in width between the edge of the ribs and the upper border of the liver; this, however, is but very rarely met with.

As the right lobe of the liver is so much displaced, while the left retains its ordinary position in relation with the heart, or at the most is displaced an inch to the left, it is evident that the organ will be greatly rotated or twisted.

Thus the lower border of the liver may reach nearly to the iliac fossa, and from thence ascend in a curved line slightly below or through the umbilicus up to the position which the apex of the heart occupies. The notch is usually found either immediately beneath the left costal arch, or an inch or so away from it, while the gall-bladder may be either in the middle line, or slightly to the left of it. The spleen is in its normal position, but the area of stomach resonance between the liver and the spleen is of course much reduced.

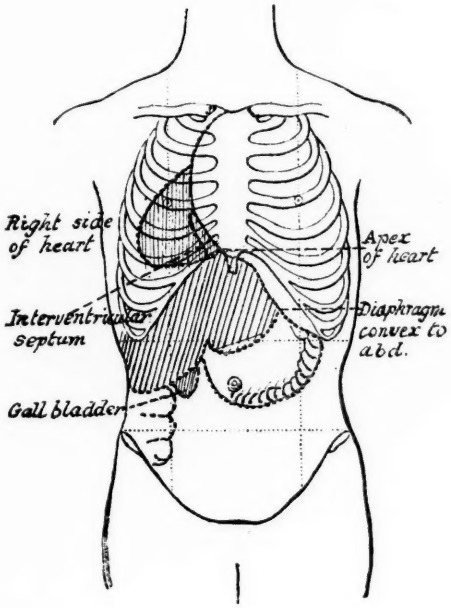
Extreme as the displacement of the liver is, I do not know that it ever produces any disturbance in its function.

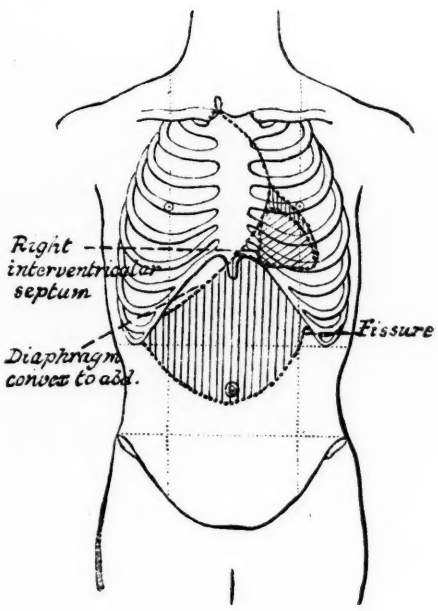
Pneumothorax of the left side.—Here it is the heart that is chiefly displaced. The descent of the diaphragm carries down below the costal arch the stomach, the spleen, and to some extent the left lobe of the liver.

The spleen may be felt quite distinctly below the ribs, the left lobe of the liver is thrust slightly down, but beyond this the liver retains its normal position, so that its upper border remains in its usual place on the right side, viz. the upper border of the sixth rib in the nipple line.

The displacement of the heart is remarkable, for impulse may be seen and felt even two inches outside the right nipple line. The impulse felt here was formerly stated to be the apex-beat, for it was supposed that the heart was fixed by the large vessels at the base, and that when it was displaced a distinct rotation took place, so that the apex moved from its normal position on the left side to the place where impulse was felt on the right. Post-mortem examination

proves this to be quite incorrect. What really happens is that the heart moves bodily over with the mediastinum, retaining approximately its normal relation to the diaphragm





and suffering little or no rotation at all; the impulse felt to the right side of the sternum being that of the right auricle, while the apex, even with the maximum displacement of the heart, lies either beneath the lower part of the sternum, or hardly beyond it. This the two accompanying diagrams prove, the one showing the surface markings during life, and the other the actual position of the organs found on post-mortem examination.

Great as the displacement is, it rarely produces any marked effect upon the heart's action. Murmurs due to the displacement are described, but they are certainly as rare in pneumothorax as in pleuritic effusion. I do not remember ever to have seen an instance myself, nor have I seen evidence in pneumothorax, any more than in pleuritic effusion, of that kinking of the vena cava which has been described as being sometimes the cause of sudden death.

(*To be continued.*)

Contributions towards a History of the Surgical Teaching at St. Bartholomew's Hospital during the Nineteenth Century.

By D'ARCY POWER, F.R.C.S., F.S.A., Demonstrator of Practical and of Operative Surgery.

II. DISCORD.

DURING the early years of its existence, and so long as Abernethy maintained his pre-eminence, we hear but little of conflicting interests in the School. A stronger than Abernethy soon obtained a footing in the Hospital, and for some years the most discordant counsels prevailed.

William Lawrence, the son of a surgeon, was born on the 16th July, 1783, at Cirencester, in Gloucestershire, and was apprenticed to Abernethy in 1799. Abernethy found him so useful and so able an anatomist that in 1803 he caused him to be appointed Demonstrator of Anatomy, though he did not become a Member of the Royal College of Surgeons until two years later. Lawrence held the post of Demonstrator for twelve years. He was elected Assistant Surgeon in 1813, and a full Surgeon eleven years later—an office which he held for more than forty years. In the winter of 1826–7 he delivered a course of lectures on Surgery at the Aldersgate Street School of Medicine, and in 1828 he succeeded Abernethy as the Lecturer upon Surgery in the Medical School attached to the Hospital. Bred a teacher, by nature a surgeon and an orator, the teaching of Surgery at St. Bartholomew's Hospital reached its acme whilst Lawrence remained in his prime. Of his lectures Sir James Paget says, "They were the best, I think, of all those given in London;—admirable in their order, their perfect clearness of language, and quietly attractive manner. They were given on three evenings in each week, at seven o'clock, after dinner. He used to come to the

Hospital in the omnibus, and after a few minutes in the museum, as the clock struck, he entered the theatre, then always full. He came in with a strange vague outlook, as if with uncertain sight. The expression of his eyes was always inferior to that of his other features. These were impressive, beautiful, and grand, significant of vast mental power, well trained and well sustained. He came in quietly, and after sitting for about half a minute, as if gathering his thoughts, he began in a clear rather high note, speaking quite deliberately, in faultless words, as if telling judiciously that which he was just now thinking. There was no hurry, no delay, no repetition, no revision; every word, I believe, had been learnt by heart. The lectures were already in print in the 'Lancet,' and yet there was not the least sign that one word was being remembered. It was the best method of scientific speaking that I have heard, and there was no one at that time in England—even if there were one in Europe—who had more completely studied the whole principles and practice of surgery."

No less remarkable was his clinical teaching, and we are fortunate in possessing an accurate account of his manner as it was known to Dr. William Ormerod, one of the very best of his pupils. Dr. Ormerod says of Lawrence: "The whole tenor of his writings, conversation, and practice was to set before the student the value of the great practical writers in the profession, and the utter worthlessness of the mere noisy claimants for notoriety; to teach all to form a proper appreciation of the constant and hard labour required for a proper and competent discharge of professional duties, and the real incapacity of any one not practically laborious; and, above all, to lay clearly before every one that, whilst professional learning allowed us to deal with some of the greatest difficulties and dangers, there was a clear line bounding our knowledge, beyond which we had no right to assume that our information extended. To be ignorant of clearly-ascertained and written knowledge, to be idle or not absolutely industrious, or to attempt to hide ignorance by obstinate certainty and noisy argument, were with him faults of so deep a dye, and so utterly below all honorable feeling, that his countenance at once told the student his hatred and contempt of such vile attempts at assuming professional knowledge.

"How often have we waited at the ward fire for Mr. Lawrence in his week, though not on his day, feeling that his love for his work and daily diligence had not forsaken him, and that he would come to see if anything was wanted! Perhaps some injury of the head, a bad fracture, or a case of acute inflammation had been admitted,—some case which had a real difficulty and required an immediate decision, or perhaps even an operation. As he entered the ward each hat was taken off, and the sister standing at the right hand corner of the door curtseyed, but no one spoke. Mr. Lawrence then bowed or nodded to somebody, or to the house surgeon, and then proceeded to the bedside of the patient, to whom a few kind words were spoken before anything was done. An examination of the patient was then gone through, with a few questions to the house surgeon, to the sister, or to the patient himself, and then the orders were given, or the patient was told that some operation was required, or nothing was said; but the short question 'Is Mr. So-and-so here?' told the regular attendants that a consultation would be held. But this short interview at the bedside was often succeeded, as we knew, by a few remarks at the fireplace away from the bedside, where a short clinical lecture on the case and its probable termination, with especial stress on the points to be watched as capable of being treated, and a minute description of any rarity either in the occurrence of such cases or in any particular symptom present, were, as we well knew, so often given and so good, that we calculated on them.

"How often have we rejoiced to see him in the theatre, whether he operated or not. If he operated himself, everything was done with the greatest care, from the time at which he tried the edge of the scalpel on his thumb, to the moment at which the patient left the room, unencumbered with any quantity of bandages, plasters, or other ill-timed applications. If he did not operate himself, we knew how sure we were to have a good view, for nobody so carefully cleared the area between the patient and the class of opaque intruders, and we knew that when he was by, persons were very shy of saying anything without being quite sure of it. These were our gain as pupils. . . .

"The student who diligently attended his practice saw a man of the highest abilities, of knowledge, of minute accuracy, and never-failing readiness, punctually attending to his duties in a large hospital, to the patients of which he afforded that care and relief which laborious education and long experience, with coolness in the boldest and delicacy in the most minute operations, could alone convey. The bookworm or the practical man, the lover of the operating theatre or the mere dexterous manipulator, might all learn a lesson from him when a rare dislocation afforded scope for reference to authorities; a cancer of the breast allowed him to quote his long and decided experience; a severe case of erysipelas or some formidable tumour of doubtful relations formed the subject of his operations; or some delicate operation for hernia or cataract attested that delicacy of touch which his great accuracy in the recognition of deep-seated matter so often showed him to possess."

The picture of Lawrence is a graphic one, and it recalls to us the accuracy with which Sir William Savory had imitated all that was best in the manner and in the teaching of his master, the man he loved.

Lawrence, however, had another side to his character. He was absolutely without emotion, and he was so rigidly just and upright in his dealings, that his actions sometimes appeared to be harsh and ungenerous. He hated and despised all cant and imposture, and easily saw through it.

He possessed singular skill in estimating the ability and attainments of others, and was not readily imposed upon. Besides, in his earlier years he was extremely liberal in his opinions, and was eager in his desire to correct some of the many abuses then prevalent in the corporate and hospital life of the profession.

Abernethy, on the other hand, was naturally conservative, and was tenacious of his position as the father of the Medical School at St. Bartholomew's Hospital.

It would appear as if some discontent had been simmering for some time between the master and his former pupil, for in 1816 an open rupture took place between them, quite suddenly and apparently without any adequate cause. In 1816 Lawrence was appointed Professor of Anatomy at the College of Surgeons, and in the course of his lectures took occasion to criticise some obscure statements of John Hunter's about the theory of life which had been upheld by Abernethy. Abernethy at once resented the criticism in such a manner as to enrage Lawrence, who replied in no measured terms. The controversy continued, religious topics were intruded, and soon all London was loud in its condemnation of infidel Tom Paine, and the arch-heretics Lord Byron and Surgeon Lawrence. The dissension did much harm to the School, for it led to the re-establishment of the Aldersgate Street School of Medicine, where Lawrence lectured for a time on surgery. But the separation did not last long, for, on the retirement of Abernethy, Lawrence was called upon to fill his place. Stanley, who had also quarrelled with Abernethy, became Lecturer on Anatomy, and Skey was appointed Demonstrator in preference to Wormald, who became one of Lawrence's first house surgeons, though he was the favourite pupil of Abernethy.

The Aldersgate Street School of Medicine proved to be a perfect Cave of Adullam. In 1831 Skey seceded from the Medical School of the Hospital, in consequence of a dispute with Lawrence, and for the next ten years he lectured there upon surgery, though he continued to hold his post of Assistant Surgeon at the Hospital, to which he was elected on the 29th August, 1827.

The presence of a private medical school in the immediate neighbourhood of the Hospital, officered by members of the Medical Staff of the Hospital, and the ill-concealed dislike of the surgeons one for another, inflicted a severe blow at the prestige of the School, and long prevented it from taking the foremost place to which it was otherwise entitled. The sudden death of Stanley on No. 6 bed in the front ward of Henry, in 1862, the retirement of Skey in 1864, the resignation of Wormald three years later, and the death of Sir William Lawrence himself on the 5th July, 1867, brought these feuds to an end.

Concerning the Ship's Surgeon and some Tropical Diseases.

By W. H. MAIDLOW, M.D.Dunelm., F.R.C.S.,
Late Surgeon P. and O. s.s. *Caledonia*.

(*Concluded from p.* 172.)

PART IV.—PLAGUE.

THE present Bombay and Kurachi epidemic broke out in last September. Previously unrecognised there, it was well known in Northern India in some villages at the foot of the Himalayas as Pali or Mahmhoori (?), in which places it is endemic with epidemic outbursts. Its most likely route to Bombay was probably from Hong Kong, with which recently plague-stricken place the commerce is very great. The Persian Gulf ports and Bagdad, and the Mecca pilgrims, have all in their turn been charged, but with not much reason. Whether conveyed by commerce or by winds would seem doubtful; the better evidence points to the former, for the germs appear to be quickly killed by aquatic or oxygenic dilution, and cases of ship infection according to prevalent winds have not been proved, in fact the ships lie in dock quite safely. It is difficult to name an incubation period; in the autumn of 1896 there were probably two cases in England (one of which at least I was associated with), both of whom had left Bombay for more than three weeks. Infection, indeed, seems to come from exposure to a common source of the poison rather than from human contact, an inoculation process having more the nature of that with tetanus. But where the poison lurks elsewhere than in patients is the question of the day. Over-crowded, insanitary, ill-ventilated dwellings are certainly predisposing elements and the hot-bed of the epidemic. Rats seem to suffer from the disease, and the outbreak began with many deaths of rats in whom Kitasato's microbe was found, and inoculation from their blood caused similar deaths in others, and inoculation of bare feet by the excreta of dead rats seemed a likely method of incidence. Where the rats became infected is not known, it was presumed from grain which harboured the germs, but experiment has had quite a negative result; a plague-stricken rat may have come from Hong Kong or Persia, "who infected the malt that infected the rat that plagued Bombay that worried Europe." At one time, again, some deaths amongst pigeons who may have eaten the grain seemed reasonable, but they may have taken the disease from grain picked from the excreta of rats diseased. Professor Hankin, whose work during the epidemic has not yet received the recognition it deserves, is said to have found the microbes in the posterior end of ants which he found in basements of the insanitary dwellings, whilst inoculation by the anterior ends had no specific result—work which indi-

cates how in future bacteriology will investigate ætiological factors, and not be contented with mere observations of humidity, temperature, sun, moon, or star. There are very few cases of plague that are easily found to have been due to contact with, or from nursing the affected; doubtful cases leave the plague hospital scatheless, doctors and nurses do not catch it as a rule, despite the sad case of Dr. Manser and his nurse. Probably *prolonged* personal contact with the sick is different, but the history of the Hong Kong epidemic is much the same. The vultures that eat the bodies of Parsees dead from plague have not been affected; there is almost special immunity for Europeans, and, to a lesser extent, Eurasians, for native servants and tradesmen have died in the very midst of European quarters, whilst the deaths amongst Europeans have probably not yet attained double figures. This immunity, instead of turning native attention to their own insanitary dwellings, as might be supposed, only fans the superstition that the Queen is angry (a beautiful statue of her had recently been defaced), that the trouble will not cease till so many heads or livers have been accorded her, and hence it is that part of the dread to hospital arises which so increases the difficulty of isolation and segregation. This, however, is not the whole reason; caste prejudices are much more potent—to die in a strange bed, not to be sprinkled with the holy water of the Ganges at death, to be seen eating by others, to lie near a Mussulman or Hindoo* as the case may be, or near a tradesman of another kind, are all examples of this feeling, which seems invincible. Hindoos are a most suspicious and sensitive race, incapable often of judging cause and effect as we do; the very chloroform given to relieve the pain of an incision into a gland is the cause of death, the drugs are poisoned! It is only a matter of degree after all; still in some parts of England the really sick fear hospital treatment.

Kitasato, to whom the credit of the first description of the microbe is usually given, describes it thus: "rod shaped, whose both extremities stain deeper than the middle part with aniline pigment; having a capsule; its shape resembles that of fowl cholera." It is found in the blood, fæces, sputum, urine, and enlarged glands; inoculable into rats, pigeons, and guinea-pigs, producing a specific disease in which similar organisms are found, not liquefying gelatine, and not stained by Gram's method. They seem to be quickly destroyed by aërial or aquatic dilution, but not improbably flourish in the soil,* and in certain merchandise.

As to the nomenclature. The Bombay authorities use the term bubonic plague; at first bubonic fever, partly with a view to tone down the ugly word plague, and partly thinking the disease really differed from plague. But even so "bubonic" is hardly accurate; in some cases there are no external or even internal glandular enlargements, for "Bubo" is derived from Βοΰβων, the groin; hence Βουβωνιάω, to suffer from groin (Liddell and Scott); but the glandular enlargement may be in the neck or axilla. Moreover, the disease is not *due* to the swellings, even if they be called buboes, but both the swellings and the other signs are due to a specific poison. Probably in this case the old method of using a well-recognised name on the analogy of such diseases as chorea, measles, gout, &c., is at present better than a pathological attempt by a name which must vary with fluctuating knowledge. In any case the Continental ports never wavered; they considered *Plague* existed in Bombay, and for some time imposed quarantine.

Of the many times the word plague is used in the Bible † there is no evidence sufficient to show that *one* was true plague.‡ The word is used more in the sense of nuisance or affliction; and every nuisance is not plague, although most plague is a nuisance. In the sense of trouble of a non-specific kind the Greek translation is πληγή, when an epidemic is meant λοιμός is used. The expression plague in association with the ten troubles of the Israelite-persecuting Egyptians under a Pharaoh Rameses is only the translators' heading, and they seem to have been more of the nature of a duel of magic or interpretation of coincidences between Moses and the wise men of the Court than aught else. Probably much the same difficulty occurred to the translators of the Septuagint as occurred to them when they translated Hebrew "Tsaraath" through Greek lepra to English leprosy. The examples of πληγή, *i. e.* of plague used in the sense of trouble not specific, are well seen in such expressions as in St. Mark v, 29, where the woman feels "that she was healed of that plague," and Zechariah xv, 12, the "plague wherewith the

* The word Hindoo is used in these pages usually in its religious or "caste" sense (as generally so used in India). I know of no English word which expresses a "native of India." "Indian" *should* express this fact, but then Columbus gave the same name to certain natives of his newly-discovered land, and the name has spread to such an extent that an "Indian" may imply equally a Comanche or a Punjaubi. The word "Hind" in the word Hindoostani seems to mean "black;" hence a Hindoo merely means a black man or negro (? Lat. *niger*), and has therefore probably nothing whatever to do with the inhabitants of the land of the Indus, and is in any case inaccurate. An accurate monosyllable seems to me very necessary to prevent confusion; "native of India" is intolerably clumsy.

* A great argument in favour of cremation. Burial customs in India are very interesting. Islam, like Europe, has earth burial; Hindoo bodies are burned; Parsees are exposed on "towers of silence," and the soft parts devoured by vultures kept for the purpose.

† Instances from the Bible have been noted in these pages because most of the diseases therein mentioned did and do exist in Palestine. Of Palestine the most accessible record is the Bible. The historical testimony of disease in India obtained from the "Vedas," or in China from such a manuscript as the "Hoang-Ty-mi-king," or in the cuneiform inscriptions of Assyria, would have been given at a much more second-hand rate, and at a cost also of diminished originality. Like all testimony from history, there is little intrinsic value in such observations, but they are frequently interesting and entertaining. It is therefore in no spirit otherwise than earnest that I have made use of the valuable Biblical records.

‡ I cannot refrain from referring the reader to Moore's 'Paradise and the Peri.' "The very vultures turn away, and sicken at so foul a prey," *et seq.* The sentiments are beautiful beyond description. It is impossible to repeat the lines here.

Lord will smite all those that fought against Jerusalem,—their flesh will consume away while they stand upon their feet, and their eyes shall consume away in their holes, and their tongues shall consume away in their mouth," is not a bit like plague—it sounds like famine. In Numbers xi, 33, we find the words, "whilst the flesh was yet between their teeth the Lord smote them with a great plague." The quails probably had eaten poisonous food, just as the flesh of grouse is occasionally poisonous. The Greeks would, however, have probably used the word λοιμος in the following instances. (1) The Sixth Plague of Egypt; but boils and blains "breaking out on man and beast" is not like plague. Anthrax has been suggested, but although the drought and flies may have been possible causes yet no mention is made of death amongst men. (2) The Botch of Egypt, Deut. xxviii: "Will smite thee with the Botch of Egypt;" "A sore botch on the knees and on the legs from sole of foot to crown of head;" also "with the emerods and with the scab, and with the itch from which thou canst not be healed." [Botch = Italian "bozzo," French "bosse," hence English boss or lump; it is the Greek ἕλκος, an ulcer. I interpret the botch to have meant gumma. Emerods are generally taken to be equivalent to hæmorrhoids,* and these threatenings were uttered in connection with or in the same year as the Baal Peor (Phallus or Lingam †) orgies.] A better explanation can be offered than plague, and so also with the plague of Pharaoh's Court in the time of Abraham (Genesis xii). (3) The "Plague of Emerods at Ekron after Shiloh" in 1 Samuel v, 6, bears not the interpretation of plague; nor is the "plague" of Baal Peor (Numbers xxi, 16), due to the disobedience of the Israelites in not slaying Moabites; and the wickedness at Shittim and again in Midian, in the light of verse 18, points very strongly to a disease other than "plague." (4) The plague of David's choice rather than famine or defeat (2 Samuel xxiv, 13), may have been plague, but it lasted only three days, and killed in that time 70,000 people; "from Dan even to Beersheba, 70,000 men." (5) After the earthquake that destroyed the rebellious Korah, Dathan, and Abiram and their followers, a plague followed (Numbers xvi, 46). "The plague is begun," and "they that died were 14,700 in addition." This, ‡ then, and the Davidic pestilence may have possibly been plague as we know it, and the earthquake may have been some predisposing factor. The oldest date of the existence of plague that I can find is B.C. 277, where Rufus of Ephesus (*circa* A.D. 98) quotes a certain Dionysius to say that in B.C. 277 a certain disease was known in Libya and Egypt, and described as Pestilentis bubonis. The date of the exodus is put at B.C. 491. Defoe's *History of the Plague* is probably a pure romance as far as figures are concerned. The Black Death of the Middle Ages is almost undoubtedly plague; the Sweating Sickness may have possibly been influenza, from the accounts.

I have notes of forty-seven cases of plague, and the following are the clinical aspects.

(1) An *acute or fulminating*, in which with little or no warning there is epistaxis or hæmatemesis, or an apparent syncope, sometimes with death in a few hours. I was lunching in Bombay when such a case happened beneath the window. (2) The so-called Pestis minor,* or Pestis ambulans, where there is general malaise, perhaps not hardly that, and an unaccountably inflamed gland, especially in the femoral group, ending in suppuration often; death from exposure and persistence at work happens, as in typhoid. This seems to be the type of endemic plague cases, and occurs in declines of epidemics. An inflamed femoral or other lymphatic gland with fever, not malarial, and no sore on foot (and if there were it might be plague inoculated), are the suspicious and difficult cases. A blood examination, of course, is the best means of diagnosis; the effects of time is obviously not a good criterion, since convalescence may be rapid, the case being mild. The "facies" must also be fallacious. Inflammation of an inguinal gland with these symptoms is much less often plague; I sent a case like this latter to the hospital, causing thereby much flutter, but it was probably not plague. (3) Then there is the pneumonic or visceral variety, and (4) the ordinary form. In both (3) and (4) there is much initial malaise and an almost characteristic face—quite early of mixed apathy and despondency, a heavy languid earthy face, a sort of exaggerated "Kismet look," with injected conjunctiva, a vacancy and bewilderment, not easy to describe, but considered by some so typical that its absence, indeed, is frequently used as a reason for excluding plague. Onset is usually sudden, with or without a rigor, with backache, headache, and vomiting. In twenty-four hours the patient is well "in" the disease—delirious, and getting out of bed. The delirium is almost of the "D. T." type, according to histories of the nurses, but there did not seem to me to be any terror from the hallucinations. Tongue is dry and brown, not thickly furred or bluish as in malaria; pulse rapid, small, weak, and soon irregular. In less than twenty-four hours one or more tender enlarged glands will be felt, usually in the axilla or Scarpa's triangle,—brawny, smooth, or faintly lobulated, and usually suppurate before reaching the size of a plover's egg if the patient does not die; sloughing may occur without definite pus formation,

* If hæmorrhoids, possibly condylomata. A plague of hæmorrhoids from Baal Peor worship is absurd.

† Many temples in India have remnants of huge phalli. They may be rather vaguely described as "wishing-stones" of a peculiar shape for those who came to pray for fruitfulness. It is obvious how Baal Peor worship could be abused.

‡ So too, possibly, the epidemic which slew the "mighty men" of Sennacherib, when he "came down like a wolf on the fold" (2 Chron. xxvii, 21).

* These should have been subdivided. Pestis ambulans, like typhoid ambulans, may or may not be Pestis minor; it is perhaps as likely to prove dangerous from neglect.

leaving a foul ulcer with undermined edges,—which are sometimes the so-called "carbuncles"* (the others being really pressure sores or sloughing of blood effusions). Petechiæ are not so very common (a petechia is the "sign" spoken of in old accounts of plague). I saw but two of these, both of which were subconjunctival. When present they are ominous of death. Hæmorrhages from the various mucous tracts are not uncommon. Liver and spleen usually are enlarged and tender. Constipation is more frequent than diarrhœa. Albuminuria is frequent; the urine may be suppressed or retained. The temperature has little that seems typical; there is an early rise to 103° or 104°, keeping up with slight remissions till the gland suppurates, when it falls, and then seems to depend upon the septicity or otherwise of the wound; on the whole, it is the temperature of septicæmia. "Inarticulo" or heralding death there is often hyperpyrexia. In the visceral or pneumonic form (3), with the same initial symptoms, and in pure cases without obvious glandular enlargement, there are signs of bronchitis or pneumonia, temperature keeps very high (a crisis is quite unusual), and the patient much more ill than the physical signs can account for. The rusty sputum, however, is quite distinct, and hæmoptysis may occur; in fact, the blood is usually much greater in amount than in ordinary lobar pneumonia. In the sputum can be found the bacillus, which must be searched for in doubtful cases. Recovery is not to be expected in this form. The elements of bad prognosis in plague are failing pulse, hæmorrhages, pneumonia, and previous starvation. The mortality at the height of the epidemic was probably about 80 per cent.—men die more often than women, Hindoos more than Mahomedans, Parsees than Eurasians, Europeans hardly at all. I have seen a child of three months affected, but I believe it recovered.

The *treatment* of plague merits some attention. Isolation and segregation are prophylactic remedies that are difficult for reasons above stated to carry out, but with their thoroughness the plague is diminishing now. Notices are posted to warn against bare feet, intemperance, insanitary states. Whisky is rather advised to be taken instead of water, or mixed with it, although the water supply seems unimpeachable. The quarantine imposed seems useless. No cases have reached London since December at least; in places where there is quarantine the plague has often in times past broken out, trade is at a standstill, and the days when it was said, rather let the ship's company die than a "whole city full," ought to have passed by, now that everyone's right to live is recognised in this altruistic year of grace 1897, and especially when the chance of infection can be nearly removed by due inspection and isolation of actual or doubtful cases, and observation of those that have landed, as is the English custom. Marseilles quarantined the "Caledonia" for ten days; the health on board was never so good, but had one passenger landed, a riot would have ensued, a member of the Extreme Left would have asked awkward questions, then fall of the ministry. Soon afterwards the citizens marvelled that there were so many dockmen unemployed; then the unemployed grumbled, and I expect did riot.

The immediate treatment is directed towards sustaining life till the poison has done its worst, by such means as are well known to all (quinine, however, has little value), and by counteracting the poison. This brings us to the two methods that so well exemplify the value of bacteriological work from a therapeutical aspect, viz. serumtherapy. Haffkine's method is a vaccination, and should have been mentioned under prophylaxis; to prevent plague he injects minute doses of an attenuated, very virulent plague serum,—analogous, in fact, to vaccination,—and it seems to do good even when the disease has occurred. He was himself of the first inoculated. Yersin's, on the contrary, is another example of antitoxin treatment, such as we have for diphtheria, tetanus, typhoid, and some forms of pyæmia; he injects some principle obtained from the blood of a plague-immunised animal. Both treatments, however, are still *sub judice*, and Yersin's was not tried till the epidemic had obviously began to decline. There is some value in injecting the involved glands where possible with 1 in 5 (?) iodine solution or 1 in 1000 $HgCl_2$. Early extirpation of them seems futile.

Meanwhile the medical officers are working patiently, and earnestly visiting house to house, doing their best amidst murmurings from the people, who can never realise that an epidemic must claim its thousands, that prevention is better than cure, who think, unless the medical voice is raised in noisy debate, and medical advice is not that of Mrs. or Miss So-and-so and retired Col. X, that nothing is being done. So it ever will be. "Justitia non fit, cœlum non ruit."

Other Diseases.*

Goitre is quite common in most parts of India. In hospital the local treatment by mercurial inunction, and exposure to sun, seems very efficacious.

Mollities ossium is said to be relatively frequent in Bombay, and is one of the most frequent causes for Cæsarean section.

In *hæmaturia* one must remember *Bilharzia hæmatobia.*

Persistent anæmia in the tropics may be due to *ankylostomiasis*—the St. Gothard Tunnel anæmia. The condition seems very frequent in Egypt.

Influenza-like symptoms accompanied by joint effusions

* True carbuncles are more spoken of than seen.

* The subject of calculus has been omitted; it is too long, and differs in no essential points from calculus in England. The operation in children of crushing through a median lithotomy wound is deserving of mention. The author has not seen it done in England.

are very often signs of *dengue*. The scarlatiniform eruption is not a *sine quâ non*. I had one such case in Bombay which was followed by persistent jaundice. An isolated case of influenza is probably rarer than one of dengue. Very little seems to be known of the pathology of this disease.

Glandular enlargement is common in natives on board ship. The officials usually consider them due to strain even when suppuration occurs, a not impossible explanation; and I believe "strain buboes" have been described in the German army. The most commonly enlarged are the axillary, inguinal, and femoral group. These often become tender in "fever," and if previously unnoticed embarrass one's mind during plague. They may be due to malaria. There are also the varicose lymphatic glands due to filariasis described by Dr. Manson. The rest may be traced to some general disease like syphilis, or to peripheral irritation, from impetigo, and a form of ringworm (Dhobie itch), &c. There are some cases of "inguinal" buboes, which seem to be only attributable to a general condition; they own no peripheral exciting cause, and are certainly not venereal, and occurring not only in the districts of plague, but in England, and I believe in the army especially, can hardly be cases of abortive plague, or Pestis minor. A writer in the *British Medical Journal* for June 12th, 1897, finds arsenic very useful for this condition.

Madura foot might easily be mistaken for tuberculous caries, at least I so misdiagnosed.

Pneumonia on board ship in a malarious native is usually fatal. It is said to be equally fatal inland. I had one such fatal case and one recovery.

Prickly heat is probably essentially due to follicular inflammation from excessive perspiration, but eczema may arise from it. For treatment a cooling lotion and a *non*-amylaceous powder is best (starch tends to block the gland openings by its hygroscopic properties, and for the same reason it is best to wash with *fresh* water after a sea bath to remove NaCl crystals). Some consider it malpraxis to treat prickly heat at all—much for the same reason, possibly, as they would refuse to help a chronic ulcer to heal even if they could. Laziness may be a factor in this negative attitude possibly.

Mosquito bites are best treated by a 1 to 80 carbolic lotion, which acts as a local anæsthetic, and by using a carbolic soap. Pennyroyal, sassafras, or eucalyptus are good also as preventives and alleviators, but nothing is so good as a proper curtain. The subject of mosquitoes is rapidly growing in importance since Dr. Manson's work on filaria, and the possibility of their connection with the malarial parasites.

Scurvy is quite rare now in the mercantile marine.

Specific urethritis in natives seems to get well spontaneously in three or four weeks. In the tropics a urethritis may occur due to no obvious cause, perhaps due to an over-concentrated urine, due to excessive perspiration. An old specific urethritis is relighted very often by no adequate cause.

Carbuncles and *boils* are certainly best treated, if severe and indolent, before suppuration, as so ably recommended by Mr. West, with injections of ♏x—xx of a 1 in 3 solution of carbolic acid in glycerine. I know of several patients subject to boils who actually request this treatment.

Febricula.—Despite the insecurity one properly feels in making an early diagnosis of febricula, there *is* probably such a disease as febricula or ephemeral fever. When it is not febricula it is probably one of the following diseases in mild form: (α) the effects of exposure to sun = ardent fever; (β) a mild exanthem, especially typhoid during typhoid epidemics; (γ) a mild remittent fever; (δ) where there is slight jaundice, Weil's disease may be suggested. There certainly is, and especially in warm climates, a mild three to six days' fever, with sometimes gastro-intestinal symptoms set up by cold or other indiscretion, associated with a furred tongue, quick pulse, loss of appetite, headache and oliguria, and best treated by a small dose of calomel, and an effervescing mixture of citric acid, soda, and phenacetin, with rest in bed and mild fluid diet, and some sulphonal at night if there be restlessness. I can think of many such cases, some of whom have caused very great anxiety. It is a disease of which the diagnosis can only be safely made after convalescence.

Tropical typhoid, whose identity with "temperate" typhoid was at one time doubtful, is one of those diseases that was once "fever," from which it has been triumphantly separated but lately. The complaint is now "everything is typhoid," which must be the case amongst those to whom everything was previously "fever." The disease may be in fact, however, for some reason on the increase, although there seems but little doubt that natives of India are almost immune, judging from P.Ms. on cases diagnosed typhoid, all of whom have probably suffered from remittent fever. The difficulties of the diagnosis depend upon (i) the very frequent absence of spots in tropical typhoid, and (ii) the great difficulty in tracing sources of epidemics; (iii) blood examination must be so often negative because so many have had malaria. The cases I saw in hospital I should have despaired of diagnosing from remittent fever—spleen enlarged and tender, rigors, and temperature character are common to both; the spots (so often absent, ? 70 per cent. in India), abdominal tenderness, and distension have to be the sheet-anchors for those who cannot use bacteriological means. Sun fever may also simulate typhoid. The diagnosis of Malta fever has been mentioned. Malaria with typhoidal symptoms has been called typho-malaria, a most iniquitous term, for others call typho-malaria a disease in which typhoid and malaria co-exist, or a new disease due to the operation of both causes, and others still call Malta fever typho-malaria—"quot homines tot sententiæ."

It reminds us of our aged and ageing friends rheumatic gout, and diabetic phthisis, &c.

Varicocele is frequent amongst Europeans in hot climates, partly, no doubt, due to relaxation of all tissues of support, sedentary occupations, and perhaps increased functions. Natives suffer less, due perhaps to their acclimatisation, and partly to a very efficient support which passes from behind forwards and upwards. Probably more actual physical and psychical discomfort *is* caused, which together with the opportunity of malingering makes the compulsory radical operation before joining the ranks in my opinion just. As regards the value of the open operation, I know of two cavalry officers who are well pleased with the result as regards themselves.

In conclusion, I do not profess to have been so exhaustive as, I fear, exhausting to those who have honoured me by reading, but have told some of the truth, and nothing wittingly false. I rather fear the appropriateness to me of that terrible criticism, "Il dit tout ce qu'il vent, mais malheureusement il n'a rien à dire."* At no time does one feel so grateful to one's old teachers and their well-known aphorisms than when confronted by the unfamiliar diseases of the tropics; difficulties are soon surmounted by those fundamental principles of medicine learnt in youth. Lectures on tropical diseases must be very useful and interesting as post-graduate work, yet I see no use for them compared with what they might replace if previously given; but this again, as all things are, is a matter of opinion. Shakespeare has it somewhere, rather fallaciously I feel—

> "He is not worthy of the honeycomb
> That shuns the hives because the bees have stings."

Fallaciously because one can get honeycomb without being stung.

My experience for the comparatively short time has probably been exceptional, but in any case with a certain amount of "keenness" it is really possible to learn very much indeed without making oneself a nuisance. What is true in England is essentially true wherever England's flag waves and civilises. "Cœlum non animum mutant qui trans mare currunt."—R.I.P.

WRITTEN IN MEDITERRANEAN SEA; *February*, 1897.

ADDENDUM.

1. I have one or two practical hints of importance for the ship's surgeon. If he have on board a doubtful fever or eruption let him isolate it, but there is no need to make a diagnosis to the port medical officer. It is sufficient to report that such-and-such symptoms exist, and let the onus, if possible, rest with the official. Thuswise one's credit and popularity may be conscientiously preserved. This is especially important at Australia, where variola yet has never been firmly rooted. I know of many cases where morbilli rubella and varicella have been misdiagnosed variola, to our everlasting annoyance. Above all things, never conceal the truth, let alone the immorality of it. It is bound to leak out, because you *must* isolate on board.

2. As regards *burial at sea* there is nothing very special; he may have to read the service. Never attempt to hush up a death amongst the crew; it is absolutely certain to be reported on the house-tops, and there is no knowing what reports will be disseminated. I know of one ship that was suspected of having had on board plague, and another cholera, owing to the secrecy of a burial.

3. Land a bad case whenever possible, especially amongst the crew, when outward bound. A death sows considerable gloom amongst the company.

4. With a little trouble one can buy quite a good second-hand outfit. The best way is to go down to the docks and make friends with the officers, who are proverbially genial and frank.

5. For the credit of our profession we must work and keep up our knowledge, and strive to keep up a good standard reputation, not inferior to that of our naval comrades, in the mercantile service.

6. An interesting paper might be written on the mercantile surgeons. I find references to them in many books, *e.g.* in Smollet, Robinson Crusoe, and even earlier. The surgeons then, like now, were often a discredit to the profession that tries to heal. With the discredit of a member, often falls the credit of the group—it is too often the case of "Ab uno disce omnes."

* Quoted in a preface by Matthew Arnold.

ERRATUM.—In the paragraph on Malta fever in my last article, the sentence should read: "It is doubtful whether it be quite correct to say jungle fever, marsh fever, and the many other fevers which are supposed to be merely local conditions of the same thing, are really identical with simple malarial fever."

W. H. M.

ILMINSTER; October, 1897.

Temperature and Sea-sickness.

I HAVE not, like Mr. Maidlow, traversed many seas, but in my short voyage to New York I had under my care a case of sea-sickness with high temperature for three days, in many respects like typhoid fever, and on account of a small spot on abdomen I had to take typhoid precautions. The following is from my notes.

Muriel H——, æt. 11. Left Paris on April 16th; walked on board ship on April 17th quite well; the ship sailed at noon. During the night of 17th, and on two following days, 18th and 19th, she had nausea and vomiting, and could not keep anything down, not even water. As she was delirious on the night of the 19th, I was asked to see her on the morning of the 20th. I examined her and found eyes bright, cheeks flushed; complained of severe headache; tongue coated, clean at edges and down centre; pulse 120, full and rather bounding; temperature 101°.

The abdomen was tender all over; rather distended; there was tenderness in right iliac region and over spleen, but not more than elsewhere; spleen could not be felt This abdominal tenderness was due to continued vomiting, and is present in almost all cases of continued sea-sickness; it is especially confined to epigastric region, and may be due to slight inflammation of coats of stomach and intestines; it is deep-seated, and points more to this than tenderness of abdominal muscles.

On 21st, 22nd, 23rd, and 24th the condition continued about the same, the temperature oscillating between 103° and 104°.

Below the left costal margin about the nipple line there was a reddish spot, exceedingly like a typhoid spot, which the mother thought had always been there, but on pressing her she could not be certain. This spot I showed to another doctor on board, and he agreed with me it was very suspiciously like a typhoid spot.

I believe that high temperature through sea-sickness is often observed in children. Dr. Schadt, of the s.s. "St. Paul," who has been five years at sea, told me that he had often observed it.

The temperature in the above case fell on the fourth day after I had seen her, and the patient left the ship quite well, but in a weak condition.

D. BOYD KEOWN, M.R.C.S., L.R.C.P.

Notes.

MR. P. J. CAMMIDGE, one of our recently elected Assistant Demonstrators of Biology, has been appointed Lecturer in Biology to the People's Palace.

* * *

DR. CLAVE SHAW will begin his class in Mental Physiology for the M.D. on Wednesday, October 6th.

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WE UNDERSTAND that Mr. D'Arcy Power will deliver the Introductory Lecture at the Royal Veterinary College on October 1st, at 1 p.m.

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DR. W. J. GOW, formerly Tutor in Midwifery at Bart.'s, and now Assistant Physician Accoucheur to St. Mary's Hospital, will deliver the Introductory Address there.

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THE SPECIMENS added to the museum during the past year will be exhibited on the ground floor of the museum from October 1st to October 15th inclusive.

* * *

MR. A. R. DOUGLAS passed third into the Indian Medical Service with 3012 marks in the competition recently held. Mr. R. F. Baird passed sixth with 2889 marks, and Mr. P. K. Chitale passed eleventh with 2776 marks.

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DR. CHATTAWAY has been elected Examiner in Chemistry for the Conjoint Board.

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THE Abernethian Society will begin its 103rd Session on Thursday, October 14th, when Mr. Langton will deliver the inaugural address in the Medical Theatre. He has chosen as his subject "Some of those after whom the Wards are named." At the conclusion of the address refreshments will be served in the Library.

IN this number Dr. Maidlow brings to a close his series of articles on the Ship's Surgeon and some Tropical Diseases. Various references in the pages of our contemporaries testify to the interest they have awakened. Dr. Maidlow is now in practice at Ilminster, Somerset, in partnership with Mr. Munden, where we wish him every success.

* * *

WE are requested to call attention of the Governors of the Royal Medical Benevolent College, Epsom, to the claims of Horace Dewick Sawtell, aged ten years, who is making his third application for a Foundation Scholarship in May next. He is the third son of the late T. H. Sawtell, M.D.Lond., M.R.C.P., M.R.C.S., an old Bart.'s man who died at Hyères, in February, 1891, from phthisis. Dr. Sawtell had been suddenly obliged to give up his practice in the North of London in 1888 when on the very threshold of success, and before it had been possible for him to make any adequate provision for his wife and four children. The case is strongly recommended by Dr. Gee, Sir Dyce Duckworth, Dr. Champneys, Mr. Butlin, and Dr. Shore, among others.

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WE are requested by Miss Vogan to state that her nephew, R. J. N. Vogan, has been duly elected as a Foundation Scholar at Epsom, and that she wishes to tender her sincere thanks to those who voted for him or otherwise assisted his candidature.

* * *

FOR Bart.'s men to distinguish themselves in active service is no new thing; nevertheless we have great pleasure in reading the account quoted in the *British Medical Journal* for September 18th, of the devoted service of J. H. Hugo, who has left us but recently, at the siege of the Malakand :—"The casualties in the 31st Punjab Infantry were very heavy,—two killed and twenty-one wounded, including Lieutenant Ford and Lieutenant Swinley, the former very severely. In fact, it was entirely due to Surgeon-Lieutenant Hugo's perseverance that Ford's life was saved; with the greatest difficulty the bleeding was stopped, Hugo holding on to the arteries with his fingers for some hours."

Amalgamated Clubs.

NEW MEMBERS.

G. H. Adam.
A. D. White.
W. B. Knobel.
G. C. J. Acres.
H. Walker.
A. W. Izard.
E. O. Hughes.
C. W. C. Harvey.
R. A. Aldersmith.
A. J. L. Speechly.
E. G. D. Milsom.
F. A. Bainbridge.
B. R. B. Truman.
F. E. Brunner.
G. E. Aubrey.
W. M. Willoughby.
H. E. Stanger-Leathes.
J. Corbin.
N. E. Waterfield.
A. H. Muirhead.
C. R. H. Ball.
F. Sanger.

The late Mr. F. W. Ellison: an Appeal.

WE reproduce here a letter written to the *Lancet* by Mr. Howard Marsh, in the hope that old Bart.'s men will show their practical sympathy with the relatives of one who lately belonged to their number.

To the Editors of the Lancet.

SIRS,—I should be very greatly obliged if you would have the kindness to insert the enclosed letter from Mr. Hatfield. The case to which he refers is one into which I have myself very carefully inquired. I am quite sure it is perfectly genuine, and it appears to me to be one in which we may, with every hope of success, appeal for help to the readers of the *Lancet*. Any subscriptions that may be sent will be gratefully received by Mr. Hatfield, York House, 1, Park Road, Forest Hill, S.E., or by myself, and will be at once acknowleged.—I am, Sirs, faithfully yours,

HOWARD MARSH.

30, Bruton Street, Berkeley Square, W.; *July 23rd*, 1897.

[ENCLOSURE.]

DEAR MR. MARSH,—I want to bring before the profession the sad case of Mr. F. W. Ellison, a former student of St. Bartholomew's Hospital, who died last September at Glenely, Adelaide, after two days' illness, aged forty-two. He took the M.R.C.S. in 1878, and after practising for five years at Catford he went to Australia twelve years ago and managed after some time to make a living at Glenely. He has left a widow and six children totally without means. The eldest, a boy aged sixteen, has weak lungs; the youngest is a boy aged six. Mrs. Ellison and her family are now in this country, and are entirely dependent on relatives, who are by no means well off. Up to the present time they have received small remittances from Australia, the result of the collection of book debts, but these have now almost ceased. An aunt has undertaken the charge and support of one of the daughters, and we wish, if possible, to secure for the family a small house within reach of some good school. They have, however, no furniture, and the friends are anxious to raise a fund for the purpose of buying some for them. If you can help me in this I shall be very glad. I have before me some flattering testimonials to Ellison's good qualities from yourself, the late Dr. Black, Dr. Gee, Sir Dyce Duckworth, Dr. Clement Godson, and Mr. Walsham, so I expect he will be well remembered at the hospital. He was a charming man and a great friend of mine when he lived here.

I have already been helping in some way, and I propose to subscribe to any fund that may be opened, and my friend H. A. Francis, who wrote from Vancouver immediately he heard of the death, has informed me that he also should subscribe.—Believe me, yours sincerely,

W. H. HATFIELD.

York House, 1, Park Road, Forest Hill, S.E.; *July 23rd*, 1897.

The following subscriptions have already been received:

	£	s.	d.
The Lancet Relief Fund	15	0	0
British Medical Benevolent Fund	3	0	0
Sir Thomas Smith, Bart.	10	5	0
Howard Marsh, Esq.	5	5	0
Dr. Lauder Brunton	5	5	0
Dr. J. Kidd	5	0	0
Sir Dyce Duckworth	3	3	0
W. H. Hatfield, Esq.	2	2	0
H. A. Francis, Esq.	2	2	0
Harrison Cripps, Esq.	1	1	0
Bruce Clarke, Esq.	1	1	0
Dr. Hutchinson	1	1	0
Rev. J. Porter	1	1	0
W. M. Kelly, Esq.	1	1	0
Anonymous	0	10	0
Total	56	17	0

Appointments.

BROWN, R. P., M.R.C.S., L.R.C.P., appointed Assistant House Physician to the Metropolitan Hospital.

BEADLES, H. S., M.R.C.S., L.R.C.P., appointed House Surgeon to the Grimsby Hospital.

BURNETT, L. B., M.A., M.B., B.C.(Cantab.), M.R.C.S., L.R.C.P., appointed House Surgeon to the Royal South Hants Hospital, Southampton.

HAYNES, G. S., M.R.C.S., L.R.C.P., appointed Assistant House Surgeon to the Metropolitan Hospital.

PRICE, F. E., M.R.C.S., L.R.C.P., appointed House Physician to the West London Hospital.

Surgeon-Captain HENRY MITCHELL, from the 2nd Life Guards, is promoted to be Surgeon-Major in the Royal Horse Guards, in succession to Surgeon Lieutenant-Colonel Melladew, July 6th. Surgeon-Major Mitchell entered the service as Surgeon-Captain, August 2nd, 1884, and was in the Soudan campaign in 1885, receiving a medal with clasp, and the Khedive's bronze star. He was appointed to the Grenadier Guards, May 30th, 1888; was transferred to the 2nd Life Guards, June 3rd, 1891; and from thence he now joins the Royal Horse Guards.

Examinations.

UNIVERSITY OF DURHAM.—H. G. Harris has passed the third examination for the degree of M.B. Also C. W. von Bergen.

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FINAL CONJOINT.—In the list last month of those who have passed the final M.R.C.S. and L.R.C.P., we accidentally omitted the names of H. Allen and H. C. P. Bennett.

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SECOND M.B. DURHAM.—P. M. Perkins has passed second in Second Class Honours. B. E. G. Bailey, R. Thorne-Thorne, and P. E. Turner have also passed.

* * *

FINAL L.S.A.—J. B. Cautley and F. R. Greenwood have passed in Surgery; and C. G. L. Dähne has passed in Midwifery.

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PRELIMINARY SCIENTIFIC (M.B) LONDON.—We regret that the name of E. C. Williams was omitted from the list published last month. Mr. Williams has obtained honours in Chemistry.

Births.

ANDREWES.—On August 28th, at Highwood, Hampstead Lane, Highgate, N., the wife of F. W. Andrewes, M.D., of a daughter.

ECCLES.—July 11th, at 63, Sackville Road, Hove, Brighton, the wife of G. Tolcher Eccles, M.A., M.B.Cantab, of a son.

Marriages.

BLAGDEN AND MURPHY.—August 10th, at Kilternan Church, by the Rev. T. A. O'Morchoe, M.A., John J. Blagden, B.A.Cantab., M.R.C.S., L.R.C.P., of Harwood, Horrabridge, South Devon, youngest son of the late Richard Blagden, Esq., of Petworth, Sussex, to Jessica, only daughter of the Right Hon. Mr. Justice Murphy, Glencairn, Sandyford, and granddaughter of the late Right Hon. William Keogh.

HOGARTH—LYNAM.—7th inst., at St. Matthew's, Nottingham, by the Rev. Canon Ferris, Robert George Hogarth, F.R.C.S (Eng.), of Salisbury, only son of the late George Hogarth, of Eccles Tofts, Berwickshire, and of Mrs. Dear, Milford House, Salisbury, to Mabel Winifred, youngest daughter of the late D'Ewes Lynam, of The Park, Nottingham.

SURRIDGE—BIRTWELL.—On August 31st, at St. Elizabeth's Church, Ashley, Edward Ernest North Surridge, B.A., M.B., B.C.Cantab., of Knutsford, to Edith Winifrede, eldest daughter of the Rev. Geoffrey Birtwell, B.A., Vicar of Ashley, Cheshire.

WILSON—WHITE.—On the 24th inst., at All Saints', Kenley, Surrey, by the Rev. Ambrose Wilson, D.D., brother of the bridegroom, assisted by the Rev. Harry Wilson, M.A., cousin of the bridegroom, and the Rev. L. H. Squire, M.A., vicar, Norman O. Wilson, F.R.C.S., of Kingston Hill, eighth son of J. W. Wilson, M.I.C.E., of Elmhurst, Kenley, to Margaret Louise, fifth daughter of George T. White, of Malvern, Kenley.

ACKNOWLEDGMENTS. — *Guy's Hospital Gazette, St. George's Hospital Gazette, St. Thomas's Hospital Gazette, St. Mary's Hospital Gazette, The Guyoscope, The Nursing Record, The Hospital.*